

Appl. No. 09/672,116
Amdt. dated April 4, 2005
Amendment

PATENT

REMARKS/ARGUMENTS

This Amendment was originally submitted on March 3, 2005, but was not entered by the Examiner for reasons shown on page 2 of the Examiner's communication dated 03/24/05. Applicant's respectfully request entry of this Amendment prior to the examination of the instant application.

Claims 1-31 stand rejected under 35 U.S.C. 102(e) as being anticipated by Rebane (US Patent No. 6,405,179). Claims 2-4, 7, 9-11, and 14-31 are canceled above without prejudice. Claims 1, 5-6, 8, and 12-13 presently on file are believed to be allowable but are nonetheless amended to include equations, expedite their prosecution and the issuance of the patent. Support for these amendments is provided, for example, on pages 6-8, and Fig. 3 of the original disclosure. In the example of Fig. 3, for negative rates of returns, the utility function is a power function with power, γ , of -15, and for positive rates of returns, the utility function is a log function. Claim 1 is amended to include the limitations of claims 2-3, and further to include the equations associated with the power utility and log utility function. Claim 8 is likewise amended. No new matter is added.

With respect to claim 1, the Examiner asserts:

"Rebane discloses, A computer implemented method of constructing a portfolio having a utility defined by at least a first function and a second function, the computer-implemented method comprising:
selecting a plurality of assets in the portfolio (abstract; fig. 6 and associated text); and
maximizing an expected utility of the portfolio (fig. 6 and associated text); wherein the at least first function is a power-utility function having a first power defining the degree of risk aversion of a holder of the portfolio and wherein the at least second function is a power-utility function having a second power defining the degree of risk aversion of the holder of the portfolio, wherein the first power is different from the second power (figs. 7-12 and associated text)."

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Applicants respectfully traverse this rejection. Different utility functions produce different investment portfolios, as shown in "Higher Return, Lower Risk: Historical Returns on Long-run Actively Managed Portfolios of Stocks, Bonds and Bills, 1936-1978," by Robert R. Grauer and Nils H. Hakansson, Financial Analysts Journal, PP. 39-53, March-April 1982. There is no disclosure in Rebane of "constructing a portfolio having a utility defined by at least a first function U_1 for positive rates of returns and a second function U_2 for negative rates of returns.....wherein the at least first function U_1 is a log-utility function and wherein the at least second function is a power-utility function...." as recited, in part, in claim 1.

In contrast to claim 1, Rebane is directed at a risk tolerance function and probability density functions. Rebane uses a variable $(1-PP(A_T))$, which he refers to as "percent of PP remaining," (col. 6, lines 37-45), a plot of which is shown as the Y-axis in Fig. 9. Rebane's variable is a probability, whose value lies between 0 and 1; it is not the value of a mathematical function. Rebane calculates the probability $1-PP(A_T)$ from the probability $PP(A_T)$. Rebane defines $PP(A)$ specifically as a probability in col. 4, line 67, and in col. 5, line 8 describes the "probability $1-PP(A)$." In col. 5, lines 25-28 Rebane describes how the probability $PP(A)$ is estimated at different levels of the monetary amount A , and in col. 5, line 30, he specifically states that " $PP(A)$ value varies between 0 and 1," and it is this function $PP(A)$ that Rebane refers to in col. 5, lines 28-33, as a "risk tolerance function." In the abstract Rebane discloses that, "The system and method create risk tolerance functions for the investor which describe the investor's monetary utility through probability preferences ..." Rebane's Fig. 2 shows these risk tolerance functions for three different investors. Since $PP(A)$ is a probability, $1-PP(A)$ is also a probability value that varies between 0 and 1 for every value of A , including $A=A_T$. In other words, Rebane discusses probability based risk tolerance functions. In contrast, in claim 1, the log-utility and power-utility functions are not based on probability, and will therefore produce investment portfolios that are different from Rebane's method. Rebane thus fails to teach or suggest claim 1. Claim 1 is thus allowable over Rebane for at least the above reasons.

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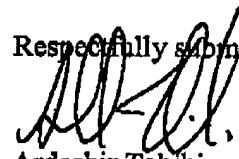
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Claims 5-6 are dependent on claim 1 and are thus allowable for at least the same reasons as claim 1. Claims 8 and its dependent claims 12-13 are allowable for at least the same reasons as is claim 1.

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance and an action to that end is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at (650) 326-2400.

Respectfully submitted,



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